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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/815,759

04/02/2004

Georgios Sakas

EFFE0010UEP-US

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31518 7590 07/05/2007
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EXAMINER

LAURITZEN, AMANDA L

ART UNIT

PAPER NUMBER

3737

NOTIFICATION DATE

DELIVERY MODE

07/05/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

general@neifeld.com
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Office Action Summary

Application No.

10/815,759

Applicant(s)

SAKAS ET AL.

Examiner

Amanda L. Lauritzen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 52-83 is/are pending in the application.
- 4a) Of the above claim(s) 52-83 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

Newly submitted claims 52-65, 66-82 and 83 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

The related inventions are distinct if (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed have materially different design(s), mode(s) of operation, function(s) and effect(s). Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

The originally prosecuted claims are not specific to providing transfer of additional data and do not include steps of determining the number of image units between two image features or a number of image units between an image feature in the first image and the ultrasound imaging detector. Furthermore, the application as originally filed does not disclose or imply these functions.

Newly presented claims are drawn to apparatus and associated method for displaying images specifying determining the number of image units between two features in an image and/or images, classified in class 382, subclass 287.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 52-83 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Response to Arguments

Applicant's arguments filed 29 March 2007 have been fully considered but they are not persuasive. Examiner maintains that Schneider teaches transfer of geometry data in the form of a spatial dimension. For example, transfer of a spatial dimension is necessary in the process of "transforming a follow image to correspond to the scale, rotation and position of the lead image," as in the summary of the invention at col. 4, lines 49-67. Examiner interprets "image unit" as any image datum, and image data is transferred with the digital image analysis disclosed, e.g., in the process of inter-referencing corresponding images by providing a map or table relating images or data from one modality to images or data from a second modality (col. 7, lines 39-49). Col. 5, lines 43-53 describes altering the view of the physician and corresponding images obtained from each modality to that altered view in the form of a composite image. This inherently includes mere transfer of a spatial dimension. Additionally Schneider discloses transformation as the "processing of an image such that it is translated (moved in a translational fashion), rotated (in two or three dimensions), scaled, sheared, warped, placed in perspective or otherwise altered according to specified criteria," at col. 6, lines 59-64. Image registration is disclosed as an "alignment process by which two images of like or corresponding geometries and of the same set of objects are positioned coincident with each other so that corresponding points of the imaged scene appear in the same position on the registered image" (col. 6, line 66 – col. 7, line 4). Examiner further cites col. 8, lines 2-9 in which an *inherent feature of an object* is used to inter-reference a lead image and a follow image (see also col. 10, lines 31-34, in which a fiducial marker is "preferably a unique and identifiable feature of the object, such as surface shapes caused by particular bone or cartilage structures within the patient's body"; also col. 12,

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lines 30-32 in which pattern mapping techniques may be employed in lieu of identifying fiducial markers). The process of translation and registration further includes “maintaining common physical coordinates” between the images acquired from selected separate modalities (col. 8, lines 27-29).

Transfer of a spatial dimension in the form of an image unit is additionally disclosed at col. 11, lines 42-54, in which texture mapping includes defining texel values (a chosen image unit) in three-dimensional (i.e., spatial) coordinates for an alternative mode of co-registering images.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 1 is provisionally rejected on the ground of nonstatutory double patenting over claims 1-14 of copending Application No. 11/227,074. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

Although the conflicting claims are not identical they are not patentably distinct from each other because the current claim 1 is broader in scope and is therefore anticipated by the conflicting claims. The current claim is broader in that defining a reference location on the surface of the object is not specified.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Schneider (US 6,351,573).

Schneider discloses apparatus for combining first and second image data, from two different imaging devices, the first being from an ultrasound detector (col. 1, line 36) and the second being one selected from the group of CT, MR, PET, X-ray, and a three-dimensional ultrasound imaging device (col. 1, lines 34-43). The images are combined with a combination device that is adapted to transfer geometry data that includes information concerning a spatial dimension of an image unit of the first image data (refer to the Abstract in which corresponding

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and displaying of a second image with a line of view established for a first image is taken to be combining of images; geometry data is taken to be coordinate data). The apparatus includes structure for storing and receiving second image data (see storage and retrieval of image data at col. 7, lines 32-34). The invention of Schneider includes scaling of the first and second image (see Abstract in which "follow image to correspond to the scale, rotation, and position of the lead image").

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda L. Lauritzen whose telephone number is (571) 272-4303. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


ALL
6/21/2007


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